18. Explain the concept of arrays with an example.

19. Write a program to swap two numbers using call-by-value and call-by-reference.

20. Discuss the significance of pointers in C and their applications.

Shanmuga Industries Arts & Science College
T.V.Malai

APRIL/MAY 2025

FSC11/CSC11 — PROGRAMMING IN C

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL the questions.

1. Define constants and variables in C.

2. List any four C tokens with examples.

3. Write the syntax for the printf() and scanf() functions.

4. What is the purpose of the goto statement in C?

5. How do you declare a two-dimensional array in C?

6. Define string-handling functions.

7. Define recursion in C.

8. List the different categories of functions in C.

9. Differentiate between structures and unions.

10. How can a pointer be used to access a structure?

SECTION B — (5 × 5 = 25 marks)

Answer ALL the questions.

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11. (a) Explain the basic structure of a C program.

Or

(b) Describe operator precedence and associativity with an example.

12. (a) Write a program to find whether a number is even or odd using the if statement.

Or

(b) Differentiate between while and for loops with an example.

13. (a) Explain how to read and write a string in C.

Or

(b) Write a program to find the sum of elements in a one-dimensional array.

14. (a) Explain the difference between local and global variables with suitable examples.

Or

(b) Write a program to demonstrate function recursion for calculating the factorial of a number.

15. (a) Explain how to pass a structure to a function.

Or

(b) Discuss the advantages of using structures over arrays.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain the different types of operators in C with examples.

17. Discuss the use of the switch statement with a suitable example.